

What is claimed is:

1. A gain amplifier with DC offset cancellation circuit comprising:

5           a gain amplifier, having an input end coupled to  
an input signal source;

          a buffer, having an input end coupled to the  
output end of the gain amplifier; and

10           an active low-pass analogue filter, coupled to  
the output end of the buffer, for filtering input  
analogue signals at high frequencies, and feeding the  
filtered buffer output signals to the input end of gain  
amplifier to be deducted from the input signals, so as  
to cancel DC bias.

2. The gain amplifier with DC offset cancellation circuit  
15   of claim 1, wherein the active low-pass analogue filter  
having a variable resistor, an amplifier, a capacitor  
pair and a comparator, the amplifier being coupled to  
the output of the variable resistor, a negative feedback  
being provided from the output of the variable resistor  
20   to the input signal source, the capacitor pair being  
coupled to the amplifier, one input of the comparator

being coupled to the output of the amplifier, the other input of the comparator being coupled to a reference voltage source, signals being output to the variable resistor after comparing with the reference voltage in  
5 the comparator.

3. The gain amplifier with DC offset cancellation circuit of claim 1, wherein the variable capacitor comprises a plurality of metallic oxide semiconductor field effect transistors (MOSFETs).

10 4. The gain amplifier with DC offset cancellation circuit of claim 1, wherein the gates of said plurality of MOSFETs are coupled to the output of the comparator, the sources of said plurality of MOSFETs are coupled to both output ends of the buffer, and the drains of said  
15 plurality of MOSFETs are output to the amplifier for controlling output voltage.